| BIEL-036 |

DIPLOMA - VIEP
(DECVI)

Term-End Examination

June, 2013

BIEL-036 : MICROPROCESSOR

Time : 2 hours   *Maximum Marks : 70*

Note :   *Question No.1 is* **compulsory.** *Answer* **any four** *from rest.*

1.   (a)   8085 microprocessor is having ALU of :   **2x7=14**
         (i)   8 bit   (ii)   16 bit
         (iii) 4 bit   (iv)   6 bit

     (b)   Which of the following is an interrupt to microprocessor 8085 ?
         (i)   CLK   (ii)   READY
         (iii) SOD   (iv)   TRAP

     (c)   Which is an edge Triggered interrupt in 8085 microprocessor ?
         (i)   INTR   (ii)   RST 6.5
         (iii) RST 7.5   (iv)   RST 6

     (d) $\overline{BHE}$ of 8086 microprocessor signal is used to interface the :
         (i)   Even bank memory
         (ii)   Odd bank memory
         (iii) I/O
         (iv)   DMA

(e) Program counter in 8085 is used :

   (i) to store address of stack top

   (ii) to store instruction

   (iii) to point the address of next instruction to be executed

   (iv) . none of the above

(f) Instruction mov A, B is _____ instruction.

   (i) 1 byte   (ii) 2 byte

   (iii) 3 byte   (iv) 4 byte

(g) RIM Instruction in 8085 microprocessor is used to check whether :

   (i) The write operation is done or not

   (ii) The interrupt is masked or not

   (iii) The read operation is done or not

   (iv) (i) and (ii) both

2. (a) What is the function of ALE and how does it function ?   **4**

   (b) Explain the five types of Addressing modes used in 8085 microprocessor.   **10**

3. (a) Differentiate between the following :   **8**

   (i) Hardware interrupts and software interrupts in 8085.

   (ii) Vectored and Non - vectored interrupts

   (b) Explain the BSR mode of 8255 and what are its characteristics ?   **6**

4. Draw the timing diagram for the execution of instruction OUT $O2_H$. Show all relevant informations on timing diagram. This instruction is stored at (2000)H memory Address onwards with Accumulator content of $(AA)_H$. **14**

5. (a) Briefly explain about the following instructions : **8**

   (i) AAD

   (ii) IDIV

   (iii) STD

   (iv) STI

   (b) Write the Assembly language program that saves the content of 8086's flag in memory location having an offset 1212 H and then to reload the flags from the contents of the memory location having an offset 2121 H. **6**

6. Write a Assembly language program for 8085, to find the 2's complement of the 16 bit number stored in memory location $(2000)_H$ and $(2001)_H$ store the result in $(3000)_H$. **14**

7. (a) Explain the operation of instruction queue residing in BIU. **7**

   (b) Explain the function of $\overline{LOCK}$ signal used in 8086. **7**

8. Write short notes on **any two** of the following :
    (a) Mode 1 of 8255   7x2=14
    (b) Hardware Triggered one shot mode of 8253
    (c) Type 0, Type 1 and Type 2 interrupt of 8086

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